



GÖTEBORGS UNIVERSITET  
INSTITUTIONEN FÖR PEDAGOGIK OCH DIDAKTIK

# Qigong in school

A study of the process in a primary school class that practiced  
Qigong exercises daily during a school term

**Gerd Brolin**

This is a summary of the study. If you would like to receive the complete (75 pages)  
research please e-mail [welcome@chineng.eu](mailto:welcome@chineng.eu).

### **Background**

Children and stress should not be synonymous with each other. However, sales data from the Swedish National Pharmacy shows that prescriptions of hypnotics and sedatives to children and adolescents continues to increase. We live in a society where the pace and flow of information is accelerating. At the same time, this increases the demands on our children in different contexts. We cannot change the times we live in but we can, and need, to find ways to manage stress and thereby increase quality of life. This is an urgent situation because we now know that children not only suffer from stress that is immediately apparent, we also know that stress is also a reason for the development of diseases later in life.

### **Purpose**

The purpose of this study is to find a tool for children to manage and reduce stress, and thereby increase their well being. The question is whether Chi Neng Qigong can be considered such a tool.

### **Method**

My intention is to, in a primary school class, introduce one Qigong session per day and follow the processes related to stress, concentration and well-being within the group during one term.

Ellneby presents in his book, *Om barn och stress* (About children and stress) (1999), a list of different stress factors a child can be affected by. The list has since been adapted to reflect the perspective of children by David Elkind (1981) and should be seen as an indication of how many stress factors a child is exposed to.

I have chosen to largely rely on Elkind's list to develop an idea of the stress levels in the class. I have been privileged to know the children well and could also get, by listening to children's stories at the start of school year, a fairly good idea of the outcome of the stress test. At this point I chose not to conduct any surveys or carry out any similar measures because I know from experience that young children (7-9 years old) have a difficult time in formulating or being aware of whether they experience chronic stress or not.

I perceive it is not ethically correct to ask detailed questions about family relationships, etc..

My assessment was that, of the 23 children in the class, around 16 children were exposed to stress factors that they could not have an opportunity to influence. More than half of the children in the class showed different behavioural patterns that are synonymous with a stressed child - such as anger, inability to concentrate, fatigue, hyperactivity, frequent visits to the toilet, etc. (Ellneby, 1999).

As it is clear that a majority of the children in the class exhibit different stress symptoms of varying degrees, it will be an interesting journey to see how their experiences, behaviours and self-esteem respond to Qigong exercises. As part of the study, I have trained to be a Chi Neng Qigong instructor in order to gain a deeper understanding of the subject of Qigong.

The study was carried out at a school in the area of Västra Götaland in Sweden during the autumn term of 2008 in a class with 23 pupils. My students and I have carried out Chi Neng Qigong exercises daily during one term. In accordance with the purpose of finding tools for children to manage and reduce stress, which entails the question as to whether Chi Neng Qigong is one such tool, I have chosen to use action research as my methodological research approach. With this approach I am using both qualitative and quantitative data collection methods.

### **Results in short**

At the start of the study, there was great concern in the class. Conflicts were common, and sound levels were high. In the beginning, the children managed to focus on Qigong exercises for about one minute. Gradually, we could increase the time, and by the middle of the term we reached up to 15 minutes per class period. Then something happened, absenteeism declined significantly compared to the control class. Conflicts between the children decreased, and in the end, petered out completely. Children's complaints of stomach pains and headaches showed the same trend. Sleep habits improved. Some children who were only able to work without interruptions for not more than five minutes could, after a Qigong session, triple their concentration times. It was predominantly boys who showed the greatest improvements in concentration between 'with' and 'without' Chi Neng Qigong. The

study shows that an increase has taken place in the level of the children's social skills, sense of community, self-confidence, concentration, motor skills, confidence in their own abilities and capacities to achieve a state of peace and calm. Together with other research in the field, the study shows that Chi Neng Qigong has its rightful place as a tool to enhance the well-being of children. Health improvement measures also go hand in hand with good quality and results.

## Purpose and questions

Ellneby (1999) emphasises the importance of, in a time like this when the tempo is turned up fast, us conveying knowledge about relaxing activities. She believes that stress may leave traces in children, especially as they are young and still growing and evolving. My purpose of this study is, as the teacher at a school, to find a way for children to manage and reduce stress and thus increase their well-being. I want to see whether Qigong can be an effective method in this context. Stress and its effects have been studied and researched about a lot, however, not as much focus has been placed on peace, calm and well-being.

My research questions are:

1. How can the process be described that occurs when children in a primary school class frequently carry out Chi Neng Qigong exercises during one term?
2. What happens in the class, during one term, in relation to student well-being?
3. I want to explore if you can see any changes over the course of a term in the areas of
  - Conflicts with peers
  - Frequency of headaches/stomach pains
  - Students' concentration on tasks
  - Absenteeism
  - Sleep habits
4. I also want the children's views and am therefore looking for answers to:
  - What are the children's thoughts about stress?
  - What do the children think about practicing Qigong?

## Implementation

After receiving parental permission, I conducted the study during the autumn term of 2008. I told the kids that we would try Qigong as a way to get relaxed. To date the children were familiar with relaxation and massage buddies so Qigong was perceived as nothing strange or different.

In late August and early September the children were interviewed where they could say what they thought and felt about stress. They were also asked to explain in what ways they relax. These interviews were conducted before we started with qigong. The interviews were conducted to gain an idea of whether stress was perceived as a problem for children. The interviews were recorded on tape. Notes were also taken down during the interview to record facial and body expressions. After each interview, I wrote down my own thoughts and ideas that came up as a result of the interview.

To assess the students sense of well-being ten factors in relation to the individual that serve as protection from stress and illness were used, based on the report "Salutogenesis therapy in theory and practice" (Cederblad 1996). These ten factors are:

1. Good social capacity
2. Positive self-esteem
3. Independence
4. Successful coping
5. Intelligence and creativity

6. Development of special interests and hobbies
7. Internal control
8. Impulse control
9. High activity and energy
- 10 Optimism and confidence

What caused me the greatest difficulty was designing the questionnaire so that it would provide me with a clear idea of the children's well-being. The questionnaire would be answered before we introduced Qigong and at the end of the study too. I decided to design the questionnaire based on what the children in the class interpreted in Cederblad's factors. To get an idea of what i.e. social skills were to them, I asked the children: How do you see or notice that a classmate is working well with others?

The children were enthusiastic and it went better than expected to develop criteria based on the children's definitions of Cederblad's factors. The questionnaire was extensive and therefore was divided up into several occasions. Two different observation procedures were used in the study, one incorporated the freedom associated with a Qigong session and the other was observing different behaviours in conjunction with the special registration schedule.

The children actively participated in the study by recording when they had been at odds with a classmate. They also noted down when they had a headache or stomach ache. This approach meant that children were involved. The results painted a picture reflecting each day of the term and provided concrete information that supplemented the survey.

Once a month, a survey was carried out covering the children's sleep habits. A second interview was carried out at the end of the study where the children told of their experiences with the Qigong sessions. In the second interview I sought answers to what Qigong meant for the children and also got answers about how we should proceed.

### **Student interviews**

Student interviews were conducted in August and September with all the children in the class, and based on issues related to stress. During the interviews we followed no strict guidelines, yet they were used more as support pointers in the interview. In their stories, the children divulged certain situations where they felt stressed. Both for ethical and humanitarian reasons, the interviews were not too much to cope with by i.e. having supplementary questions. A summary was made after each interview and the children had the opportunity to confirm whether I understood them correctly or not. Based on the approach, both the children and their stories became clearer and the children also had the opportunity to further clarify their stories.

### **Mind - body - sense**

The children appreciated the alone time with the teacher and were very happy to chat. After an initial phase, we entered the area of stress. Posture and facial expressions changed and they often made a sad impression. Most children became quiet and spoke more slowly when the topic came up. Several children had a need to have something in their hands, and some began to wander around. More than half of them found it hard to keep concentrating on the issue and were easily distracted, even though they had questions and wanted to know more and tell more in regards to this topic.

Body language signalled clearly what the children knew. In some cases, sadness even continued for a period of time after the interview. My reflection was that I must tread very carefully and give the children lots of space to be able to tell me exactly what they wanted to without any in-depth follow-up questions from my side. Children's verbal descriptions of how it feels when they are under stress provides an understanding of their bodily expressions during the interview.

- It feels like a bad dream.
- It's a horrible feeling.
- When someone tells me to hurry up I get a stomach ache.
- It feels hard
- Pain in my body and arms.
- I get a headache. My head spins as well.
- I can't see that well then.
- It doesn't feel that great.
- It feels very sad.
- I feel tense in my body.
- I cannot find a sense of 'me'
- My heart is beating faster than I can keep up with
- I drop things and they break.

One of Qigong's pillars is the relationship and interaction between mind - body - sense. Interviews demonstrated that a clear way of thinking affects both body and mind in a tangible way. When you read the children's statements and observe their body language during the interviews, it is the behaviour that Ellneby (1999) describes as a sign of a stressed child.

#### **Feeling good as a result of**

Answers to questions: 'How do you become calm? What do you like doing? How do you unwind and relax?' and 'What makes you happy and cheerful? Overlapped together into one area, you could summarise with the question 'What makes me feel good?'

The kids felt good from: (in descending order):

1. Playing with a friend
2. Playing with my cat or dog
3. Going on holiday
4. Reading a book
5. Going to swim
6. Watching TV
7. Playing computer games
8. Wining in soccer/football
9. Going to an amusement park
- 10 Having a birthday

Responses were considerably focused on social interaction with peers, family or pets. Elkind (1981) identifies five characteristics as protective factors against stressful situations and environments. The most important characteristic is the social character of the child being comfortable with adults and their peers. Children prioritise, therefore, the skill that represents the strongest protection against harmful stress. After analysis of the extensive documentation from participant observations and logbook records, three main themes were revealed; concentration, motor skills and self awareness.

I have chosen to present the results in a narrative sense, although it will be a presentation of the first degree, meaning that I interpret using terms that are close or identical to those that participants used. The reason for this is that I want to invite the reader in and experience the environment in which the study takes place. The result is a summary based on current records which are bundled together on a monthly basis. The observations concern mainly Qigong sessions.

Today's research shows that every living organism is in constant contact with, and constantly influenced by, the surrounding environment. (Uvnäs, Moberg 2000). We can create an environment based on the needs we have and what we want to achieve. I have embraced lessons from children's stories of stress and aim to provide the children

with the most stress-free environment as possible. In Qigong sessions, lights are turned off in the classroom, a lava lamp is lit, and soft music is played. The children in the study mentioned that they already felt calm just upon entering the classroom at these times. The new experience of the environment's importance in creating a mood and calmness is something used spontaneously by children in other contexts.

## **Observations**

### ***September:***

After receiving parental consent, we started in the second week of September and I told the kids that we would start doing Qigong in school. The children were curious and keen. I told about the general concept of Qigong, after which each child was allocated a separate Qigong space. I showed the initial exercises of "Lift Qi Up". At this point, several students lost concentration. Someone went to the bathroom, several children stood and chatted with each other while some crawled around on the floor. My attitude throughout the project was not to reprimand a student. I felt that this would be a challenge and decided to begin with short exercises, because I wanted each child would know that they succeeded.

Together with the children we decided to start with 1 minute of Qigong, and 2 minutes the next day, and so on. The challenge appealed to the children. We agreed to start with exercise "La Qi" where one should imagine that one has energy between their hands. One child came up with the proposal that we would pretend that we had "The Snitch" from the Harry Potter books between their hands. The children were delighted by the idea. The first month was characterised by children not concentrating and only brief moments of Qigong being implemented. During the first month, it was unusual for the children. Many stood and grimaced at each other and tried to interfere with their peers.

Most children in the group had difficulty with balance when standing with their feet together. Another challenge was to find different parts of the body. When the kids would point to their belly button, many ended up pointing at their chest, forehead, or on top of their head and so on. It was clear that self awareness was a developing area. Another problem was coordination and spatial perception. It was also difficult for them to comprehend the difference between tense and relaxed. For some children, it was difficult to find a direct and open approach. Those who had difficulty starting with Qigong were mainly the younger pupils with motor difficulties due to age and those children who previously demonstrated difficulty with motor skills and concentration.

### ***October:***

In late October we were up to ten minutes per Qigong session. The children had ceased to make faces and giggle. On the other hand, children with attention difficulties still found it hard to stay focused on the movements. To remedy this problem, we decided together that if we could not manage or lost ourselves, children could play the "Still Game" which means that they would try to stand still at their space and put their hands on their belly button and close their eyes. This worked very well and quietness began to slowly spread. The children had also begun to ask for Qigong sessions and were keen for them to take place every day. They also gave suggestions in regards to affirmations (positive things to say to themselves).

Spatial awareness had been improved and the children found their set "Qigong spaces" easily after exercises such as dancing. The children had come to be aware of the difference between tense and relaxed, and even casual. Self awareness was slightly better yet many children still had difficulty with this. Coordination was virtually unchanged, as well as posture.

### ***November:***

In November we witnessed major changes. The change was striking and very different from one week to the next. It was now completely silent during Qigong sessions. The children were able to concentrate on the movements, even those who previously had had great difficulty concentrating. Motor skills had considerably improved. More and more children could close their eyes during the exercises and now a sense of calm radiated which did not previously exist. The calmness spread even over into ordinary school work. Qigong sessions were now up to about 20 minutes per day.

**December:**

The positive trend continues. The children express that they are pleased and proud that they know Qigong. They ask and want to learn more. Many children are using Qigong spontaneously in school work such as when they are stuck on something like a math problem. Children now know the exercises La Qi and Lift Qi Up by heart. They also know the affirmation and visualisation exercises. The duration of Qigong sessions is up to 20-30 minutes.

During Qigong sessions, the children's motor skills gradually improved month by month. They can now manage to do more difficult balance exercises such as the "Crane's walk", without any major problems. Much progress has been made regarding self awareness, direction and spatial abilities, the ability to cross the body's middle line, and coordination.

It's not just during Qigong sessions that motor development is noticeable, yet also during lessons and breaks. Children's posture and movement patterns have undergone a great change. A result was that knee scrubbings, bruising from falling, twisted ankles and colliding with friends during the school day had virtually ceased. The children were at one with their bodies. A safe, happy and optimistic person is different from an uncertain one. Even those children who previously withdrew and kept to themselves are now playing in games. Through improved motor functions, self-confidence increased and the ability to participate in the games on equal terms. There is now a friendlier and more harmonious atmosphere amongst the children during lessons, in corridors and during play breaks.

In my logbook entries, it is easy to distinguish a change of attitude in myself as a teacher during this period. During September, there were many concerns and feelings of inadequacy, and even uncertainty. The focus was on what was not working and all the obstacles and difficulties. Then the tone became happier and more optimistic. Qigong exercises also affected me and the interaction between the children's well-being and mine was very apparent.

**Summary of results**

The initial interviews about stress showed that the children experienced the pressure of time as the most stress-inducing factor. The children even showed through their body language that stress brought unpleasant feelings. The result of the interviews coincides with several of the stressors that Ellneby (1999) and Währborg (2002) cover such as time pressure, stress, adults' stress (parents and teachers) and relationship disruptions.

In the analysis of participant observations at Qigong sessions, three areas emerged: motor skills - self awareness and concentration. In all three areas, major developments occurred during the term. The children, through Qigong sessions, were given daily training in motor skills, self awareness and concentration, which yielded very good results. For those children who previously withdrew and kept to themselves, their increase in motor skills and self awareness was a result of far greater magnitude in relation to playing and free time. The increased self awareness also helped the boys that in the past had a tendency to "happen" to run or bump into others. Earlier, these incidents usually resulted in conflicts.

Observations with fixed parameters show a significant decline in visits to the toilet during lessons and the number of vocal teacher complaints due to high chatter or other disruptive behaviour. The children also showed a significantly improved ability to take instructions and get started with their work on their own. Results indicate that the children's ability to concentrate has increased. In practice, it turns out, the mood is more calm and pleasant between the children because there are not as many distractions as before. Ellneby (1999) takes up noise as being stress-inducing.

The same trend was seen in relation to concentration and the time study regarding diary writing and the children's abilities to concentrate on their tasks. The results are based on time studies each week where the children, at one point during the week, wrote in their diary after doing Qigong and on another occasion, had practiced no Qigong. Discrepancy between the two time measurements during the same week rose for every month, from one minute in September to eight minutes in December.

At the individual level, it was a big spread between the differences in time from 18 minutes to 0. It was mostly boys with previous attention difficulties that accounted for the largest time differences, while in girls, who initially had good levels of concentration, little or no effect of the Qigong session could be seen in this context. Since concentration is an important factor in learning (Kadesjö, 2002), the result is significant.

With the help of a questionnaire at the beginning and the end of the study, a good notion of the children's well-being was achieved. Upon comparing results between September and December, positive trends occur in relation to all factors included in the questionnaire. The factors that have had the greatest development are self-confidence, creativity and independence. This is followed by social skills, impulse control & optimism, and confidence about the future. A slight increase has occurred in the factors of activity & energy, inner control, and interests & hobbies. The factor that was reflected mostly in daily occurrences was that social skills had strongly increased. This also affected, in one way or another, a number of other factors.

Factors	September	December	Increase
Social skills	60%	85%	25%
Self-confidence	47%	88%	41%
Independence	52%	83%	31%
Creativity	44%	76%	32%
Interests and hobbies	66%	69%	3%
Internal control	62%	72%	10%
Impulse control	30%	55%	25%
Activity and energy	54%	68%	14%
Optimism and confidence	53%	76%	23%

Table 16. The proportion of children as a the percentage who see themselves positively in relation to the various factors

The fact that the children had achieved a better sense of well-being was also proved by headaches and stomach pains having completely disappeared. Absenteeism due to illness was well below the control class. Sleeping habits had changed radically. Many of the behaviours that Ellneby (1999) describes as reflective of a stressed child have reduced or stopped i.e. such as aggression, apathy, restlessness, fatigue, insomnia and continual visits to the toilet. Final interviews about what the children felt about Qigong showed that the children have appreciated Qigong greatly. They had positive experiences as they related to Qigong i.e. by finding it easier to stay friends with fellow students, having better endurance, and having better balance. The children felt that they thought more of themselves and that they were happier. The children felt that they had strategies in order to more easily become calm and think beautiful thoughts through affirmations and visualisations.

## Discussion and concluding thoughts

In the discussion section the study is tied together - issue - method - theory and results.

From the results, interpretations, valuations, and conclusions are made, where some results are highlighted and earmarked for further investigation. As a teacher, the focus of the discussion is about the study's aim to find a way for children to manage and reduce stress, and thereby increase their well-being.

### Stress

The interviews at the beginning of the school year regarding stress, gave the impression that the main cause of the stress that children experienced was lack of time, to not have enough time to get things done. Verbal complaints from teachers about asking a child to hurry up were deemed by children as a negative experience. Even in the questionnaire about well-being one could see those tendencies about not having enough time. In this respect, only 13% of children wanted to have a lot to do in lessons. The main reason, according Ellneby (1999), that children develop stress is that they feel they are inadequate and not good enough.

It is a common phenomenon in schools that children are not getting the time they need to finish their tasks. They are inundated constantly with new things by ambitious and well-meaning educators who, in turn, go about with a sense of inadequacy. Mounds of started, yet unfinished, work pile up for both children and adults. The feelings of inadequacy and not being good enough settle in easily.

The children in this study gave signals that they had a need for freedom and breathing space. In one of the interviews a student wished for the following: “I would like to put all the clocks in a large rocket, and send them up to the moon - here they can stay.”

That the children in the study indicated that they felt fine fit well with Westlund’s study (1998) demonstrating things that children feel good from doing, i.e. to play with a friend, going on a vacation and sitting down and have peace and quiet from reading a book.

Time is also needed for knowledge to be consolidated and translated into skills. Illeris (2007) emphasises that all learning involves two different processes: “A process of interaction between the individual and its environment, and an inner mental appropriation and processing procedure by which impulses from interactions are integrated with results from prior learning”. With this in mind, it becomes obvious that schools should offer children a stress-free environment with room for breathing space. It is not just about stress and an existing sense of inadequacy. According to Erik Homburger Erikson’s theory “The eight ages of man” (Tamm, 2002), school children in the earlier ages (7 -11 years) are in the phase characterised by working methods contra to inferiority.

In order to develop harmoniously, it is important to work through the crisis phase of maturity in a positive way without too many failures. If we adults in the school environment become more aware of and attentive to children’s sensitivity to their shortcomings and what impact it can have, both short and long term, there is much we can do organisationally, pedagogically and in terms of the approaches we take.

The concept of stress must also be defined by what causes it. This is not a factor, yet rather considered as the individual’s interpretation, perception and motivation as being critical for the reaction that surfaces. The concept is, as Währborg (2002) writes, an expression of our time filled with individual complex contexts, sentences and meanings.

The approach is consistent with George Kelly’s cognitive personality theory where he considers that human beings construct their own reality, depending on their individual interpretations and perceptions. Qigong achieves a calm mind, and with positive affirmations and visualisations at one’s fingertips, it provides a great opportunity to manage even the most stressful of situations. Another important role, which was also shown by the interviews, is the adult’s emotional state. As adults, we are role models for kids, and how we handle various kinds of stress affects the children. We can have many balls in the air but we can only bring down and manage one ball at a time.

### **Qigong**

Eastern medicine sees the body and soul as a whole. It takes into account the patient’s general state of mind and body to find imbalances that caused a condition. In the East, the emphasis is on correcting imbalances before the body is injured, or any diseases or symptoms break out. It is said that farther back in Chinese history, there was a physician responsible for each village. The physician got paid in some form as long as the villagers were healthy. The eastern approach has become increasingly common, even in the West. Yet in the West, we are still quick to use traditional medicines of various kinds, such as sleeping pills for children, according to the National Swedish Pharmacy’s statistics. In this study, the children had relatively frequent headaches and stomach pains, yet instead of treating these, we looked at possible causes of the problems and found stress signals. Practicing Qigong probably decreased stress, and thus well-being increased. It had the effect of seeing headache and stomach pain complaints disappearing completely.

Qigong has traditionally been practiced by adults. In my opinion, it is extremely important that Qigong exercises are adapted for children and their developmental level. There must be a lot of playing and that there is no requirement

for precision in the movements. Perfectionism is banned in this context. This is to be a positive experience for children. This allows the guidelines to be implemented so that students develop and deepen their ability and desire to move, and are encouraged to express imagination, feelings and a sense of community.

The Qigong form called Chi Neng Qigong (find your potential) works on three levels: physical, mental, and energetic. On the mental level, tools focusing on movements and positive affirmations and visualisations are used. The children were fascinated by the affirmation and visualisation exercises. It was a new experience to think in images. With the help of visualisations, concentration, the brain and the nervous system were trained, which means that they could increase their ability to concentrate towards achieving their goals. The children were given a tool to think positive things and not get stuck on negative thoughts. A new discovery for me was that children often think negative thoughts about their own personality and performance. Through affirmations (positive statements), children were provided with a way to reverse this trend. The improved and altered self-perception was noticeable, among other things. As shown by the questionnaire results from September and December, confidence rose by 41%.

There are also other methods in the world of education that help children calm down and increase their well-being, such as relaxation techniques and massage buddies. An interesting question is whether Qigong adds something more to these other relaxation techniques or not. I have, for a number of years, practiced both relaxation techniques and having massage buddies in my classes and feel I have, after 35 years of teaching, the experience and knowledge to be able to make this comparison.

	<b>Qigong</b>	<b>Relaxation</b>	<b>Massage Buddy</b>
Peace and quiet	* * *	* *	* *
Relaxation	*	* * *	* *
Calming down	* * *	*	*
Concentration	* * *	* *	* *
Positive thoughts	* * *	* *	*
Visualisation Ability	* * *	* *	*
Motor skills	* * *		
Self awareness	* * *	* *	* * *

*Table 17. Own estimation regarding the effects of practicing qigong, relaxation techniques, and having massage buddies*

### **Peace and quiet**

My experience is that children find it easier to relax using Qigong than with the other methods. It concerns mainly the children with concentration problems. In Qigong exercises one needs not be quiet, yet there is a constant, slow, and fluid motion that makes it easier for these children to relax. Group dynamics become even stronger in Qigong and if a child gets lost with the movements, they can easily get back on track by looking at peers.

### **Relaxation – Calming down**

In terms of relaxation in the school, one tries to free themselves from physical or psychological stress by sleeping or sitting. It is on the mental plane where one is active while the body is relaxed and calm. In Qigong, relaxation is used, which means that concentration using only the muscles and muscle strength is absolutely necessary to perform a movement. By providing children with knowledge on how to achieve a relaxed state, it becomes a tool that they can use in everyday life, even in stressful situations.

### **Concentration**

Even with concentration, I believe that Qigong has advantages over relaxation techniques and massage buddies. With Qigong, it involves movement, and children with attention difficulties find it easier to be focused. For relaxation, usually hyper children have difficulty with concentration. Even with massage buddies, it involves working in pairs which makes it easy for distractions to arise that in turn affect concentration.

### **Positive thoughts - visualisation**

The essence of Chi Neng Qigong is to combine motion, affirmation (the formulation of the idea of what you want to achieve with training) and visualisation (creating a mental picture of what you want to achieve) (Patricia van Walstijn, 2006). Even in relaxation exercises, positive thinking and visualisation are used, yet here they are often led by someone who is in charge of the relaxation session. In qigong, the children themselves control their affirmations and visualisations after they have learned the technique.

### **Motor skills and self awareness**

Today's society has radically changed the way we live. Natural opportunities to gain the physical and motor training our bodies need have been replaced by more sedentary work that has implications for our health and well-being. Children have a natural need to move about, yet also, the amount of time that children sit still has also increased (Raustorp, 2004). It can result in weight increases and worsen motor skills (Larsson and Meckbach, 2007). Motor skills' importance for a child's physical, emotional, social, and cognitive development is highlighted in recent research in this area (Hammar and Johansson, 2008, et al.) The importance of physical activity is covered more and more (Larsson and Meckbach, 2007).

Since we practiced Qigong every day, the children received regular motor skills training, which gave very good results. Even the children's self awareness went through a major development during the study. Research in the field, shows that daily movement has a positive effect on cognitive thinking, the ability to concentrate, school work, and not the least, self-esteem. Movement and exercise is also something that activates the body's 'peace and quiet' system which thus reduces stress hormones (Uvnäs, Moberg, 2000).

Studies show that the motor skills affect the social status and acceptance that a child may experience amongst a group of peers (Larsson and Meckbach, 2007). A social group's way of perceiving an individual is determined by how members of the group perceive themselves (Smith, 1992). Raustorp (2004) observes that social relations are important for human growth, development and health, and are a factor that can affect an individual's health in a powerful and immediate way.

I see a clear connection between increasing children's motor skills and self awareness, and better social interaction. It was shown especially clearly in the children who had strong difficulties with motor skills, self awareness and spatial awareness. At the beginning of the study, many conflicts arose in the school corridors and queues, for example, during lunchtime. The origins of these conflicts were mostly children running into each other because they had difficulties in judging distances because motor skills were deficient. Peers would see these collisions as deliberate and a conflict would arise. As motor skills developed, these incidents were reduced, and by December, were completely gone.

Motor skills are also part of a child's development of their personality. Motor, physical, cognitive and social aspects all develop a child (Hammar and Johansson, 2008). The daily motor skills training revealed that the cautious and anxious children had greater confidence in their motor skills and showed a greater desire to participate in games and other activities.

In the current group of children, some were those who were reluctant to go out at breaks. If they went out, they spent most of the break standing and watching their friends as they jumped rope, threw balls around, or played games. If friends asked them if they wanted to join in, they refused and became reclusive. In November, there were no trends of this kind anymore and the children enthusiastically took part in break activities. Ericsson (2003) has, in his thesis "motor skills, concentration and school performance", concluded that children with motor skills deficiencies that received motor skills training every day performed better on national tests in both Swedish and mathematics than children with similar motor skills deficiencies that only had regular physical education.

In my opinion, similar trends could be deduced regarding the current child group. In the group of students that showed signs of having motor skills difficulties, there were students at the start of the school year who, amongst

the year 1 class students, only knew 1-4 letters of the alphabet and could not rhyme or comprehend sound patterns. For these children, progress was not that great until November, yet when calm had spread amongst the children, development came quickly. By the Christmas break, all of these children were at the latest reading level. My experience is that, based on the level of reading skills that the children exhibited at the beginning of the term, it could be expected that proper reading would develop much later than was the case. Of course, motor skills and self awareness can be developed through other forms of motion than Qigong. Yet I have, during my 35 years as a teacher, never seen such a large development in the motor skills of children over such a short period of time. I consider it paramount in today's schools to have a wide range of activities that focus on movement where Qigong can be an element.

### **Concentration**

The study shows that Qigong has positive effects on children's abilities to concentrate. Diary writing is, in my opinion, the most significant measure of the study that highlights the relationship between Qigong and concentration. Since the time studies were carried out during the same week, with and without qigong, a number of other factors were negated that otherwise could have influenced the outcome.

To concentrate means that you must open up and let in your surrounding world enter through your senses. An ability to concentrate requires that we evaluate and sort out various impressions and, based on them, decide what should be included or not. To keep one's attention on a specific piece of information or particular task and to keep out irrelevant sounds, and thus be able to focus one's thoughts. This sorting work is facilitated considerably if the mind is calm and harmonious. Through Qigong exercises, the children were able to draw their attention, perceptions, feelings and thoughts towards a particular task. During the exercises children focused attention on movements and focused their thoughts. Thus they were provided with concentration exercises and tools to develop their general skills. They then used these skills with their schoolwork. As a result the children's ability to get started, stick to, and finish a task increased. Children not only experienced an increased ability to be able to concentrate on diary writing, yet schoolwork in general, which resulted in good results in, among other subjects, reading and mathematics.

It is not an unusual situation in schools that tasks are placed on students without students yet having had the chance to train to gain the skills necessary to carry out those tasks. Interestingly enough was that the boys' concentration levels increased more than the girls' when we were doing Qigong before diary writing. The Swedish School Board concludes that differences between boys and girls is increasing, that boys are falling back more and more compared to girls. My thoughts are that Qigong can help to give boys a better foundation to handle schoolwork.

In September, 56% of the students said that they can easily come up with ideas and solutions for different things. The corresponding figure for December was 74%. As stress levels drop, thinking changes and we gain better access to internal resources and creativity. There arises a sense that one's abilities are sufficient enough to meet the challenges one faces. Concentration intensifies, increasing awareness and satisfaction one feels inside. In other words, a state of "flow" is achieved.

### **Self-confidence and social skills**

Children's self-confidence and their social skills increased dramatically during the term. Good relations with peers likely stimulates the 'peace and quiet' system, not only through physical contact, yet also through feelings of support, warmth and love (Uvnäs, Moberg, 2000). It is scientifically proven that Qigong reduces production of the stress hormone cortisol (Jones BM. *Altern, Med* 2000; 1:8). The main suppressor of cortisol production is the hormone and neurotransmitter oxytocin (Uvnäs, Moberg, 2000). Surges in oxytocin levels are linked to greater peace and greater interaction between individuals. Impressions and feelings can be processed in this state, which is also characterised by openness and curiosity, especially when interacting with other individuals. Interestingly, these changes are not only instantaneous, yet persist even after some period of time. Good relationships are likely to stimulate the 'peace and quiet' system, not only through physical contact, yet also through feelings of support, warmth and love.

Uvnäs and Moberg's description of the effect of increased oxytocin levels is entirely consistent with the perceived and documented changes in the class. Children's sleep gradually improved during the term. Improved sleeping habits in turn make it possible to better cope with the school environment, learning, and social interaction. Surroundings having become calmer contributed to positive developments in several areas. It became a positive cycle which greatly affected self-confidence. For children aged 7-10 years, friends gradually become increasingly important. At the same time, fragile self-confidence and feelings of inferiority are not unusual, according to Homburger Erikson. It is crucial for children's personal and social identity development to have good relationships with peers. It is not only amongst individuals that interactions should function, yet also for the group as a whole. Through a well-functioning group, children find their identity, develop self-confidence, and feel secure in a tolerant and accepting environment.

The children said in interviews that they liked it when the whole class practiced Qigong. They experienced a togetherness and sense of community. Uvnäs - Moberg take up, in their book, 'Calmness and touch', how oxytocin is released from touching and that spiritual contact is also a form of touch. In his theories, Maslow ties being accepted to the need for love and a sense of belonging to a community. This need must be filled in order for an individual to further develop. In his theories, Antonovsky (2005) takes up the concept of strong KASAM and rigid KASAM (sense of coherence). My empirical conclusion is that it is possible, within a relatively short period of time, to develop one's KASAM from being rigid to being strong. With the kids handling stressful situations with greater calm and confidence, they could see strategies and solutions to various problems. Where they previously experienced chaos, they could now make situations both understandable and manageable. It related not only to relationships with peers, yet also time pressures and in making choices.

The interviews revealed that many children felt very positive that the exercises were completely new for everybody. The benchmarks that children typically judge their peers' performances on didn't exist. Everything was new to everyone and everyone had the opportunity to experience "I can".

When we succeed with something, we grow. It is especially important in the 9th year class when children find themselves coping with a dual role. While the ability to recognise differences develops as well as the ability to recognise the consequences of these differences, identity development takes place by stemming from a search of similarities. Who am I? Well, someone capable of the same things that others can do or having the same things that others have.

There are many factors that come into play, but for me, there is no doubt that Qigong sessions are a contributing factor to children's increased levels of self-confidence and social skills. Elkind (1981) refers to the social character as a major protective factor against stress.

### **Concluding words**

My purpose of this study was to find a way for children to manage and reduce stress and thereby increase their well-being, and I wanted to see if Chi Neng Qigong is an effective method in this context. Through an action research approach, and with varying data collection methods, the process has been described that occurs when the children in the study continuously practiced Qigong over the course of one term. I have sought answers as to whether changes have taken place in regards to conflicts, headaches and stomach pains, concentration, absenteeism and sleeping habits. In the study, children have had a major involvement on several levels, which enhances credibility. The overall results show that children in the study have undergone significant positive changes in all areas that the study covered.

Due to cortisol levels decreasing with Qigong, and the "calm and quiet system" being activated (Jouper, 2000), it is not surprising that Qigong affects various functions such as concentration, emotional control, social context, spatial orientation, etc. Motor skills and self awareness have developed through motor skills training which positively affects physical, emotional, social, and cognitive development. If one feels secure in one's self awareness, a surplus of energy is left over that can be used for learning.

In addition, the psychological needs of community and warmth further enhance children's well-being and quality of life. Elkind (1981) points out some properties that protect against stress factors, such as social skills, confidence and independence. These are areas in which the children in the study have made very good progress and hopefully make the children more equipped to cope with stressful situations and environments.

It is important to be aware that both the 'fight and flight' reactions and their opposites, the state of peace and quiet, are vital. Just as we need the ability to mobilise force, we need the opposite. In states of calm and rest, the body reloads, fills depots, and heals. Peace and quiet is an important component of leading a good life - for men, women and children.

Since Qigong is associated with nature, the lotus flower can summarise the study. With peace and quiet, community, social skills, concentration, confidence, self-confidence, motor skills and confidence in the power of thought, man is equipped to seeing existence as being meaningful, comprehensible and manageable, and thus can gain a sense of community. Together with other research in the field, the study shows that Qigong in schools has its rightful place as a tool for promoting children's well-being. Health improvement measures go hand in hand with good quality and performance at school. School teaches individuals and prepares them for adult life, and in hindsight to the times we live in, it's paramount to spread knowledge about this anti-stress tool.

It is desirable if further research is carried out in the field of children and Qigong. This study is based on an empirical foundation that shows that children are affected positively in several respects by practicing Qigong. Further research is needed on a larger scale and with control groups. Another very interesting field to explore further is what physiological effects occur from practicing Qigong.

## **Epilogue**

At the start of the academic year 2009/2010, the school starts a project where Qigong is woven into the Outdoor Adventure & Education Pedagogical Programme. The project aims to broaden the spectrum of different teaching methods and learning styles by using the Adventure & Outdoor Education Pedagogical Programme and Qigong. We therefore want to gather those students who have difficulty finding good work flows and motivation for school work by linking together their interests and different learning styles and provide a tool for them to be able to more easily calm down.